

FIG. 1

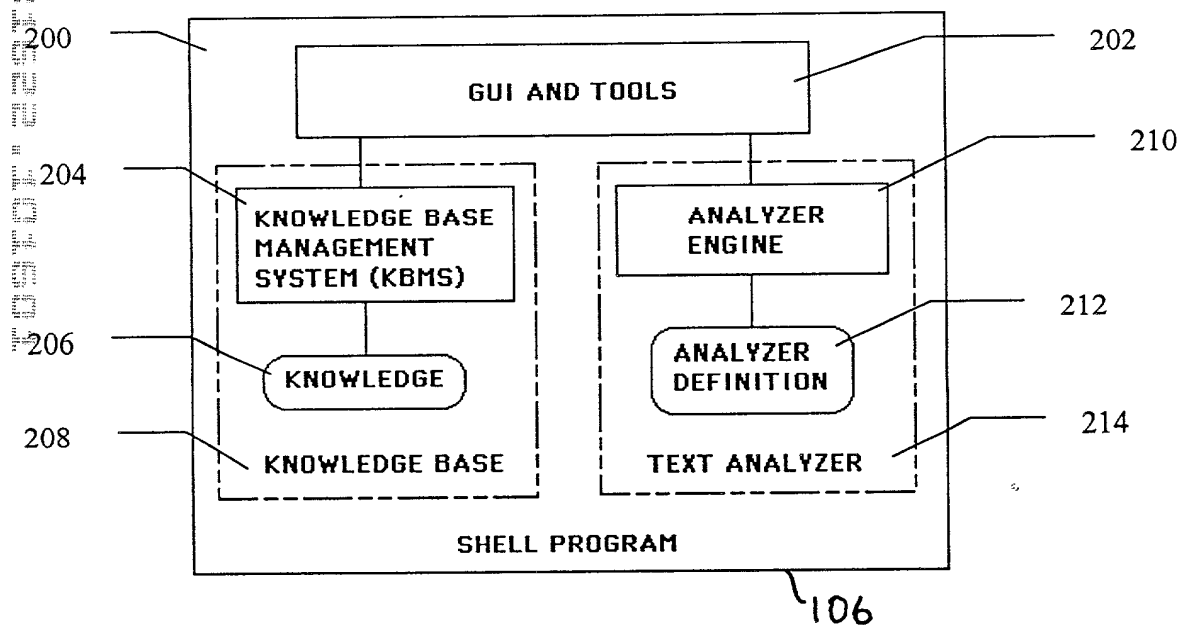


FIG. 2

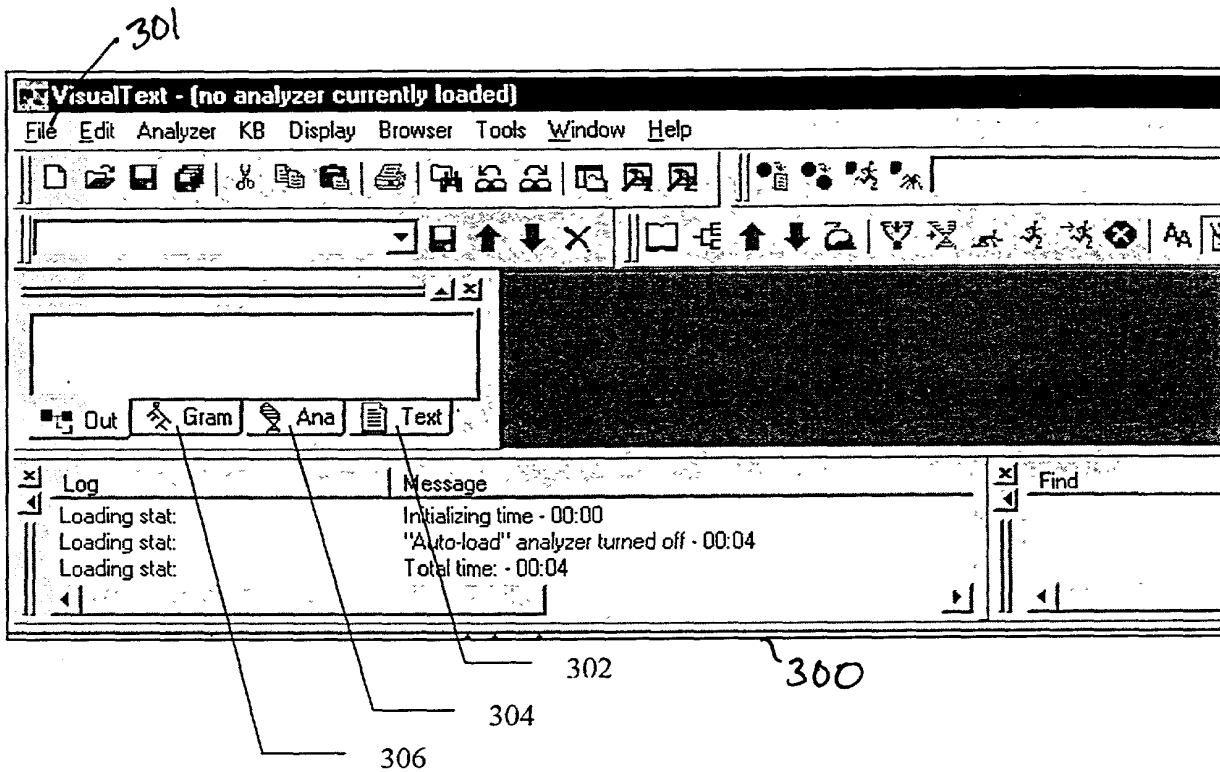


FIG. 3

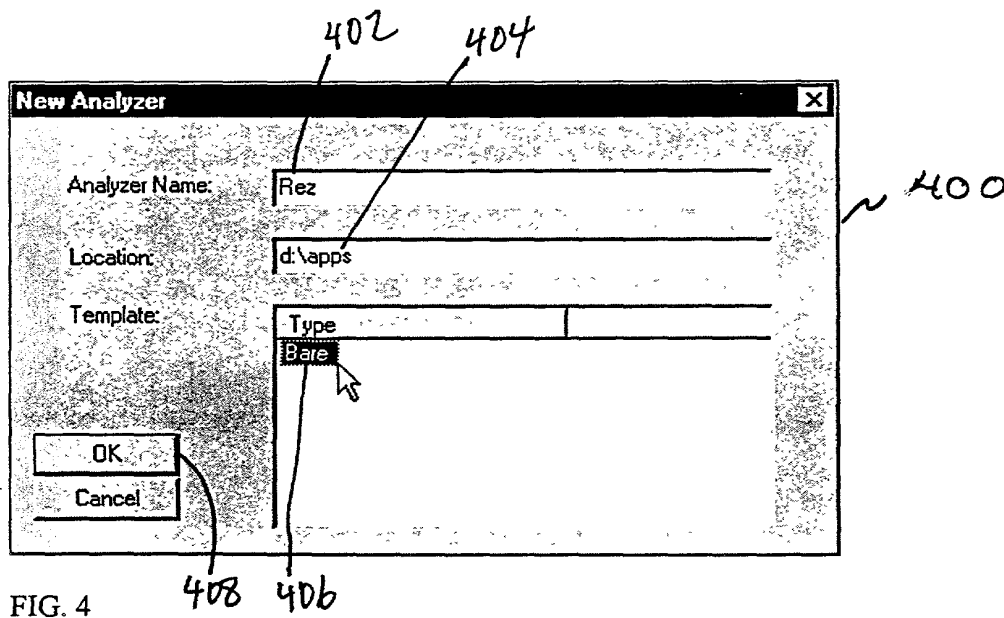


FIG. 4

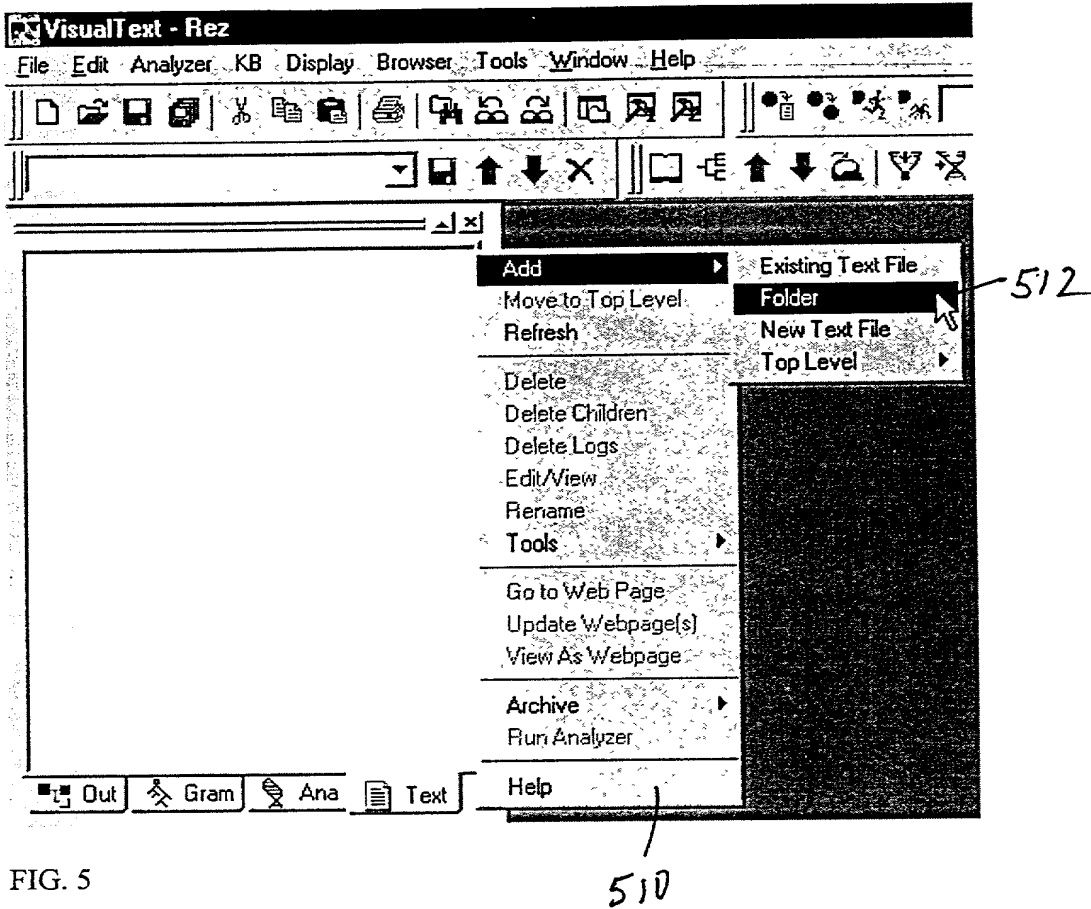


FIG. 5

606

608

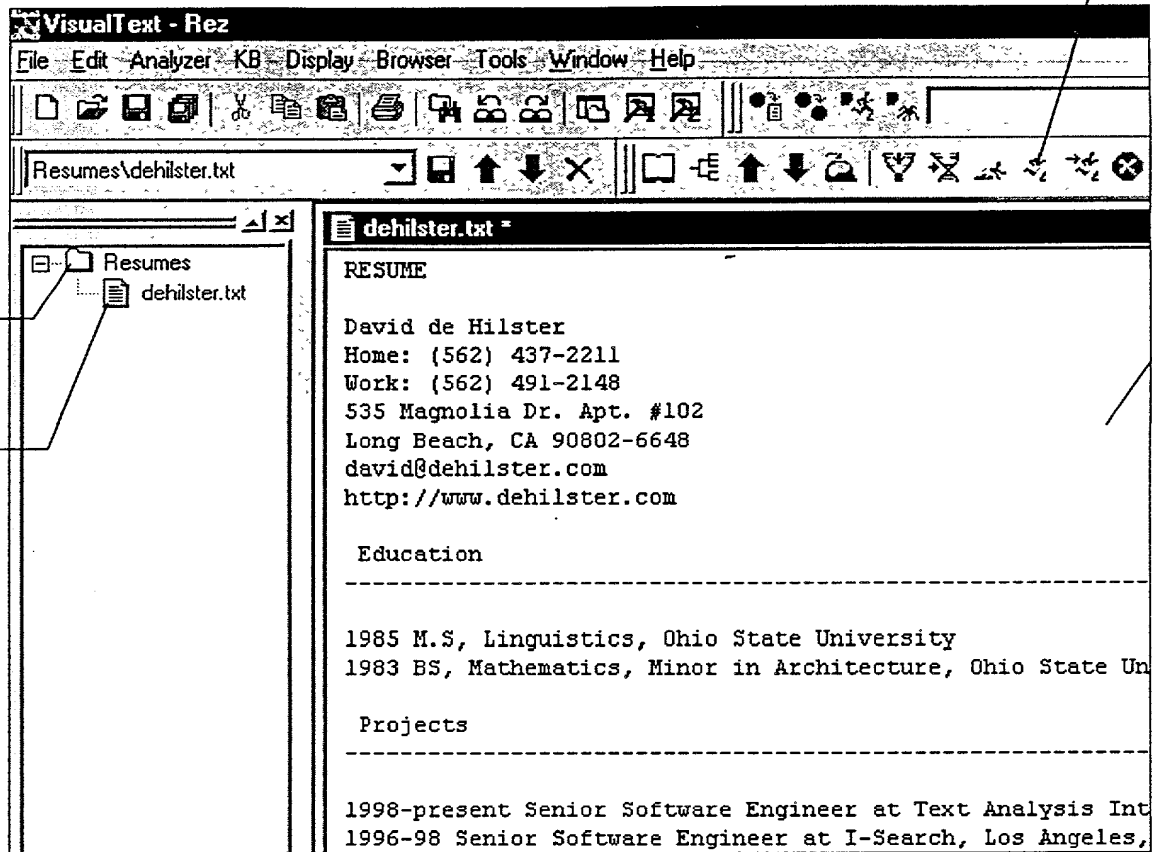


FIG. 6

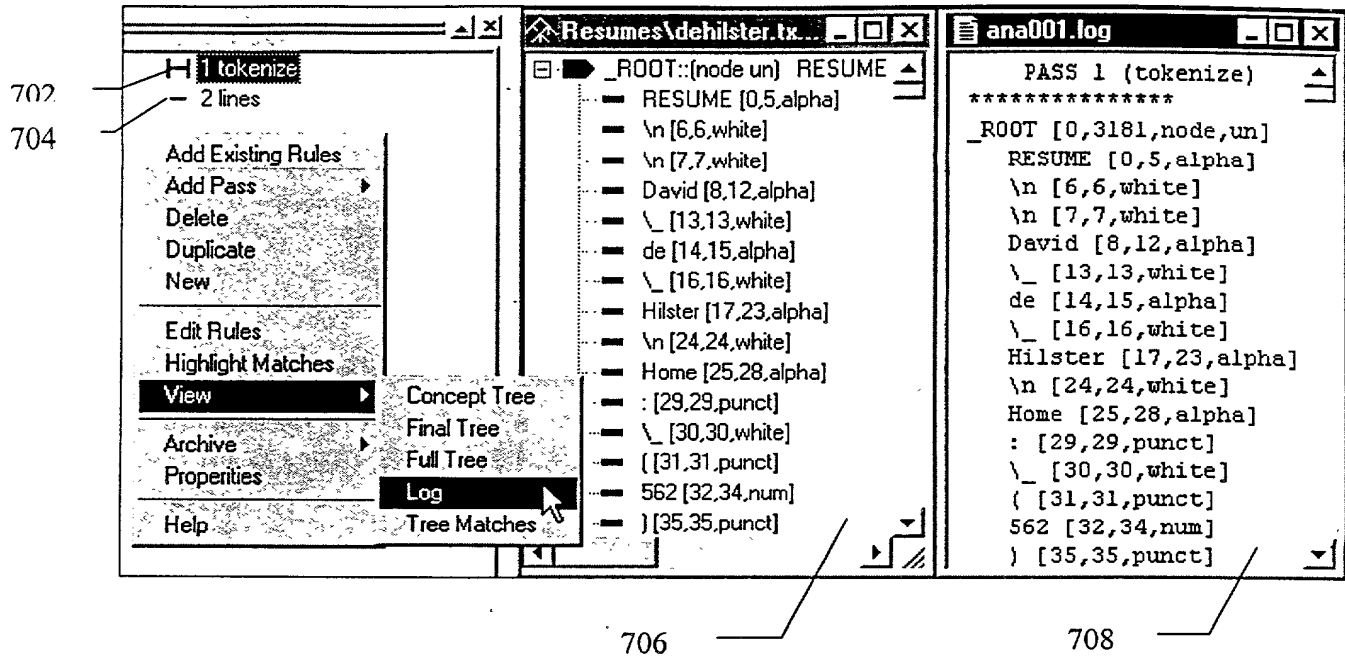


FIG. 7

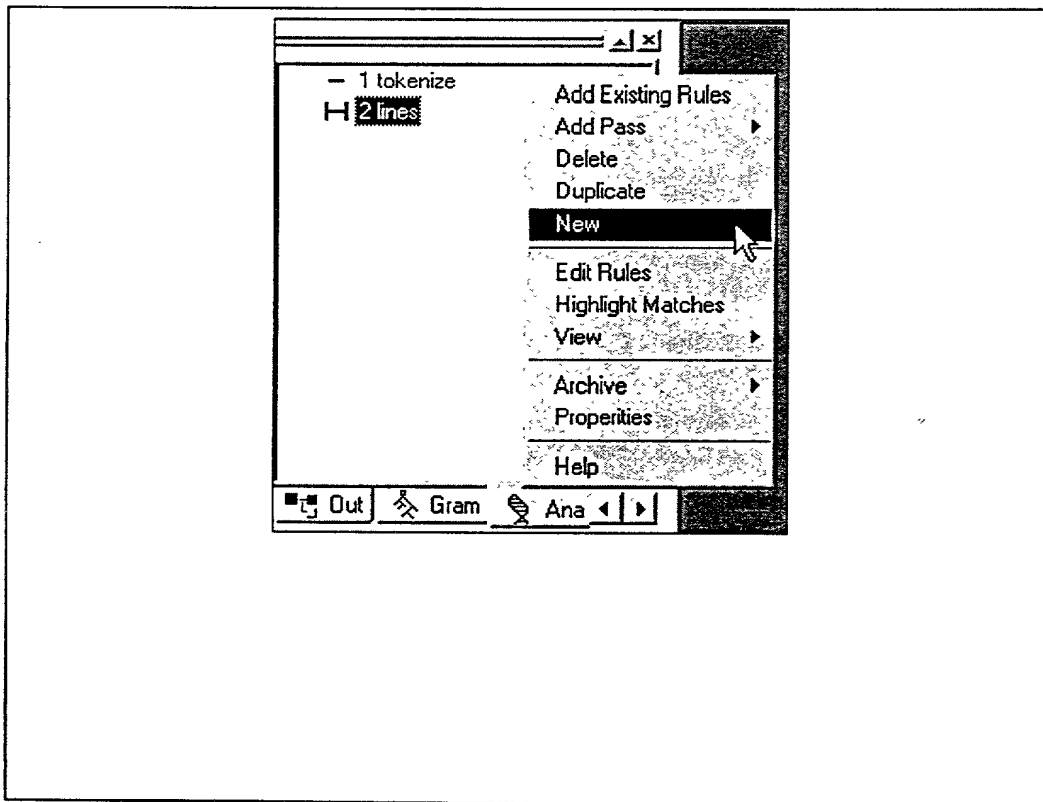


FIG. 8

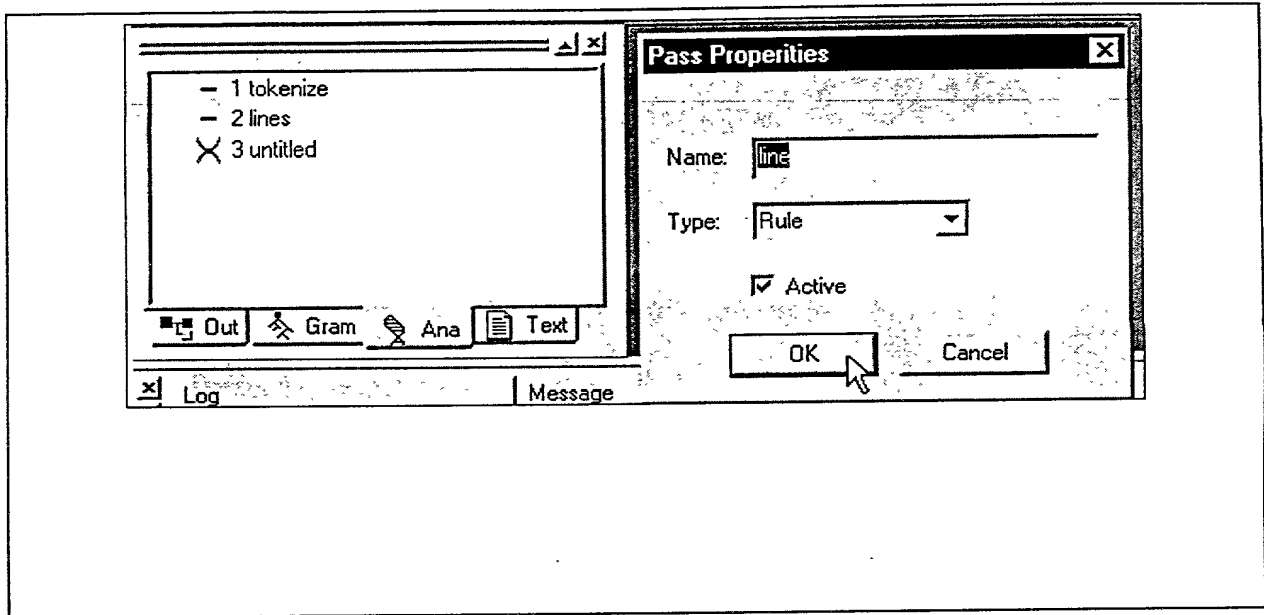


FIG. 9

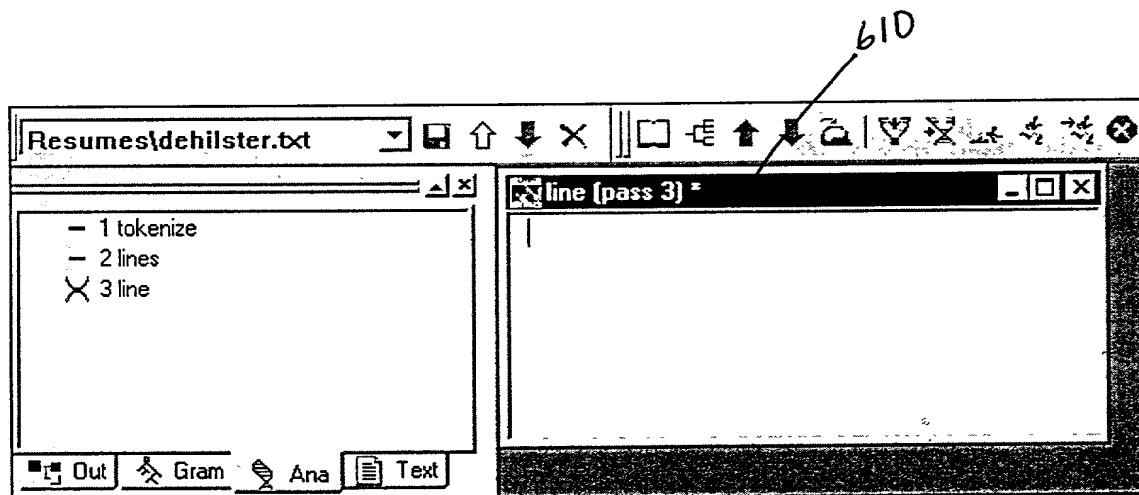


FIG. 10

```
line [pass 3]
@NODES _ROOT
@RULES
_BLANKLINE <- _xWILD [matches=(\ \r \t)] \n @@

_LINE [unsealed] <- _xWILD [min=0 max=0 fails=(\n)] \n @@

# If last line of file has no newline.
_LINE [unsealed] <- _xWILD [plus fails=(\r \n)] @@
```

FIG. 11

The screenshot shows a software window titled "Resumes\dehilster.txt" with a toolbar and a list of actions on the left: "1 tokenize", "2 lines", and "3 line" (selected). The main area displays a parse tree for the file "Resumes\dehilster.txt: \_ROOT (line)".

The parse tree structure is as follows:

- \_ROOT::(node un) RESUME David de Hilster Home: (562) 437-2211 Work: (562)
  - \_LINE::(node un) RESUME
    - RESUME [0,5,alpha]
    - \n [6,6,white]
  - \_BLANKLINE::(node)
  - \_LINE::(node un) David de Hilster
  - \_LINE::(node un) Home: (562) 437-2211
  - \_LINE::(node un) Work: (562) 491-2148
    - Work [46,49,alpha]
    - : [50,50,punct]
    - \\_ [51,51,white]
    - [ [52,52,punct]
    - 562 [53,55,num]
    - ] [56,56,punct]
    - \\_ [57,57,white]
    - 491 [58,60,num]
    - [61,61,punct]
    - 2148 [62,65,num]
    - \n [66,66,white]
  - \_LINE::(node un) 535 Magnolia Dr. Apt. #102
  - \_LINE::(node un) Long Beach, CA 90802-6648
  - \_LINE::(node un) david@dehilster.com
  - \_LINE::(node un) http://www.dehilster.com
  - \_BLANKLINE::(node)
  - \_LINE::(node un) Education
  - \_LINE::(node un) -----
  - \_BLANKLINE::(node)

FIG. 12

```
line [pass 3]

@CODE
G("number of lines") = 0; # Initialize counter to zero.
@@CODE

@NODES _ROOT

@RULES
_BLANKLINE <- _xWILD [matches=(\ \r \t)] \n @@

@POST
++G("number of lines"); # Increment line count by one.
single(); # Reduce matched nodes to _LINE.
@RULES
_LINE [unsealed] <- _xWILD [min=0 max=0 fails=(\n)] \n @@

# If last line of file has no newline.
_LINE [unsealed] <- _xWILD [plus fails=(\r \n)] @@
```

FIG. 13

<ul style="list-style-type: none"> <li>- 1 tokenize</li> <li>- 2 lines</li> <li>- 3 line</li> <li>X 4 output</li> </ul>	<pre>output [pass 4]  @CODE fileout("output.txt"); "output.txt" &lt;&lt; "Number of lines="                &lt;&lt; G("number of lines")                &lt;&lt; "\n"; @CODE</pre>	<pre>output.txt Number of lines=56</pre>
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FIG. 14

```
@PATH _ROOT _educationZone _educationInstance _LINE

@POST
if (!X("city",3))
  X("city",3) = N("$text");
# noop()
@RULES
_xNIL <- _city [s] @@
```

FIG. 15